

**PTU-026 SAFETY AND EFFICACY OF TRANSNASAL PERCUTANEOUS ENDOSCOPIC GASTROSTOMY PLACEMENT-EXPERIENCE IN A DISTRICT GENERAL HOSPITAL**

D Majumdar\*, C Wells, AD Dwarakanath. *Gastroenterology, University Hospital of North Tees, Stockton on Tees, UK*

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**Introduction** Percutaneous endoscopic gastrostomy (PEG) is an alternative and important way to maintain nutrition. Trans-nasal PEG insertion (t-PEG) using small-calibre endoscope has been reported to be safe and effective than the conventional trans-oral PEG (o-PEG) in malnourished patients with head and neck cancer.<sup>1</sup> The current study aims to evaluate the safety and efficacy of trans-nasal PEG in patients with benign condition.

**Methods** In this prospective study twelve consecutive patients who were referred for PEG insertion for benign conditions were allocated for conventional and t-PEG into 1:1 ratio over the study period of five months. All the cases were discussed in PEG multidisciplinary team meeting and procedures were performed by a single experienced endoscopist. Data were collected for sedation and comfort score and complications. A visual analogue scale was used for objective assessment of comfort. 14 French CORFLO gastrostomy tubes were used in all the cases.

**Results** Seven of them were male and the mean age was 64.2 year (range: 21–81 year). The median follow up period was 27 weeks.

More patients needed sedation and analgesia in conventional PEG group and mean sedation dose and comfort score were lower in t-PEG group. Nutritional goals were achieved in all the cases. There was no immediate complication in both group but, one patient in each group had their PEG tube dislodged after four weeks of insertion.

**Conclusion** The findings from this study reaffirm that t-PEG placement using a small calibre endoscope through nasal route is safe, well tolerated and effective to maintain nutrition in patients with benign conditions. A multicenter randomised controlled trial is necessary to validate our findings and to evaluate the cost effectiveness.

**Abstract PTU-026 Table 1**

Parameters	t- PEG (n)	o-PEG (n)
Total number of patients	6	6
With LA spray only	2	0
With sedation	2	2
With sedation and analgesia	2	4
Comfort score of 1	5	2
Comfort score >1	1	4
Mean sedation dose (Midazolam in mg)	1.8	2.8

**REFERENCE**

- Vitale MA, Villotti G, D'Alba L, De Cesare MA, Frontespezi S, Iacopini G, Unsedated transnasal percutaneous endoscopic gastrostomy placement in selected patients. *Endoscopy* January 2005;37/1(48–51):0013–726X

**Disclosure of Interest** None Declared.

**PTU-027 REAL-TIME EVALUATION OF OESOPHAGEAL CAPSULE ENDOSCOPY IN VARICEAL SCREENING AND SURVEILLANCE – A PILOT PROSPECTIVE STUDY**

<sup>1,2</sup>HY Lee\*, <sup>1</sup>N Visio, <sup>1</sup>R Walmsley, <sup>1</sup>A Jafer. <sup>1</sup>Department of Gastroenterology, Waitemata District Health Board, Auckland, New Zealand; <sup>2</sup>Department of Endoscopy, Manchester Royal Infirmary, Manchester, UK

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**Introduction** The role of oesophageal capsule endoscopy in assessing oesophageal varices has been previously studied<sup>1</sup> where downloaded images are evaluated subsequent to study completion. This is the first study evaluating real-time viewing of oesophagogastric findings during capsule transit through the upper gastrointestinal tract for this indication.

The primary aim was to assess the accuracy of real time oesophageal capsule study in identifying oesophageal varices in patients undergoing variceal screening or surveillance. Secondary aims were to establish the ability of oesophageal capsule endoscopy to detect gastric varices or portal hypertensive gastropathy, and to ascertain post procedure patient perception of comfort compared to standard gastroscopy.

**Methods** Inclusion criteria was patients with cirrhosis referred within our centre for variceal screening or surveillance. Exclusion criteria were known dysphagia, suspected or known gastrointestinal tract stricture, suspected active gastrointestinal bleeding and active hepatic encephalopathy.

Capsule assessment was performed by instructing the patient to ingest the oesophageal capsule with sips of water/simethicone mixture in left lateral patient position. Oesophagogastric mucosa was evaluated in real time during capsule transit through a computer attached to the video recorder unit using three sensor element leads.

Standard gastroscopy was performed by another endoscopist, blinded to capsule findings, within the same day. Intravenous sedation was permitted during gastroscopy, if needed.

Patient preference and comfort levels (by digital analogue scale where 0 = no pain, 5 = very painful) were recorded post-recovery.

**Results** Thirty-one patients with cirrhosis (17 males, 14 females, median age 60 years) were included. There was moderate agreement level in assessing the presence of oesophageal varicose (Kappa value 0.545,  $p < 0.005$ ) (See table below).

Majority of patients ( $n = 26$ , 84%) preferred oesophageal capsule endoscopy compared to gastroscopy. Capsule endoscopy

**Abstract PTU-027 Table 1**

	Oesophageal capsule	Gastroscopy	Agreement level
Oesophageal varices			
Present	13	18	72.20%
Absent	11	13	84.60%
Overall			77.4%, Kappa 0.545 $p < 0.005$
Portal hypertensive gastropathy	6	13	46%
Gastric varices	2	3	67%

had better mean comfort score (0.4 vs 2.0,  $p < 0.001$ ) even with intravenous sedation during gastroscopy in 17 (55%) patients.

**Conclusion** Real-time viewing of oesophageal capsule potentially offers a less invasive means of variceal screening/surveillance with better patient comfort.

#### REFERENCE

- DeFranchis *et al.* Esophageal capsule endoscopy for screening and surveillance of esophageal varices in patients with portal hypertension. *Hepatology* 2008;47:1595–1603

**Disclosure of Interest** None Declared.

#### PTU-028 FIRST HUMAN SERIES OF MAGNET ASSISTED CAPSULE ENDOSCOPY (MACE) IN THE UPPER GI TRACT USING THE NOVEL MIROCAM-NAVI SYSTEM

<sup>1</sup>I Rahman\*, <sup>2</sup>M Pioche, <sup>3</sup>C Shim, <sup>3</sup>I Sung, <sup>2</sup>J-C Saurin, <sup>1</sup>P Patel. <sup>1</sup>University Hospital Southampton, Southampton, UK; <sup>2</sup>Hôpital Edouard Herriot, Lyon, France; <sup>3</sup>Konkuk University Medical Center, Seoul, Korea, Democratic People's Republic of Korea

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**Introduction** Attempts in employing a simple technique of capsule endoscopy for visualisation of the upper GI tract has, thus far, been experimental, cumbersome and potentially expensive. We describe the first human series for comprehensive visualisation of the upper GI tract using the simple Intramedic MiroCam-Navi system. Our aim was to demonstrate the manoeuvrability of this magnetic capsule and evaluate its ability to completely visualise and maintain views in the upper GI tract. **Methods** 26 volunteers observed a 12 hr overnight fast. 30 mins before the examination volunteers drank a preparation mixture of 20 mg of maxalon syrup with simethicone and pronase. After capsule ingestion, volunteers were allowed sips of water during the procedure. The MiroCam-Navi magnet was placed at strategic points on the body surface and rotated to hold and manoeuvre the capsule. Control was assessed by moving and holding the capsule for 1 min to visualise each of the following stations: lower oesophagus, cardia, fundus, body, incisura, antrum and pylorus and also by traversing across the stomach and through the pylorus. Total procedure time was taken from the moment of ingestion of the capsule to either reaching the duodenum, or after attempting a maximum of 10mins to traverse the pylorus. All volunteers subsequently underwent a standard upper GI endoscopy within 3 days.

**Results** Volunteers' median age was 38 yrs (range 26–45), median BMI 24.1 (range 19.4–38.2), median volume of water consumed 800 mls (range 200 mls–1500 mls) and median procedure time 24 min (range 12–39 min). Table 1 shows the success of clear visualisation of landmarks

The capsule could be held in the lower oesophagus, cardia, fundus, body and antrum in 92%, 88%, 92%, 88% and 81%

Abstract PTU-028 Table 1

	Landmark visualised	Landmark not visualised
GOJ	92% (n = 24)	8% (n = 2)
Cardia	88% (n = 23)	12% (n = 3)
Fundus	96% (n = 25)	4% (n = 1)
Body	100% (n = 25)	0% (n = 0)
Incisura	96% (n = 25)	4% (n = 1)
Antrum	96% (n = 25)	4% (n = 1)
Pylorus	100% (n = 26)	0% (n = 0)

occasions respectively. The capsule could be moved from the fundus to the antrum in all cases and traverse the pylorus in 50% (n = 13). Age  $\geq 40$  was associated with successful pyloric traversing ( $p = 0.04$ ).

There was positive concordance for 8 out of 9 minor pathological findings with standard upper GI endoscopy. A small 4 mm submucosal lesion was missed by capsule endoscopy in the cardia of one volunteer where views were obscured.

**Conclusion** This is the first convincing demonstration of the potential value of MACE in the upper GI tract. There is a high degree of visualisation and control, with some improvement required for optimising fundal views and traversing the pylorus.

**Disclosure of Interest** None Declared.

#### PTU-029 THE USE OF ENDOCLOT™ THERAPY IN THE ENDOSCOPIC MANAGEMENT OF GASTROINTESTINAL BLEEDING

J Patel\*, M Bhuva, I Al-Bakir, J Landy, S Beg, M Fullard, S Catnach, A Leahy. Watford General Hospital, Watford, UK

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**Introduction** Endoclot™ is a non-toxic topical haemostatic powder consisting of absorbable modified polymers. We previously described our early experience using Endoclot™ as an adjunct haemostatic endoscopic therapy in 6 patients undergoing elective/emergency upper or lower gastrointestinal (GI) endoscopy.<sup>1</sup> We now present the largest case series to date describing the use of Endoclot™ therapy in GI bleeding.

**Methods** Endoclot™ was applied in upper GI bleed cases only when initial treatment with standard endoscopic dual therapies failed to achieve complete haemostasis. It was also applied to control bleeding post endoscopic mucosal resection (EMR) of rectal polyps. Endoclot™ was delivered by a dedicated applicator system onto bleeding areas. Successful Endoclot™ therapy was defined as achieving complete haemostasis during endoscopy, with no further bleeding within 30 days.

**Results** Endoclot™ was utilised for 18 patients (11 men, 7 women, mean age 74; upper GI bleed n = 15, lower GI n = 3). Haemostasis was achieved in 16/18 (89%) patients. Endoclot™ was successful in 13 patients with an upper GI bleed: mallory-weiss tear (n = 2); gastric ulcer, all Forrest classification 1b (n = 2); duodenal ulcer, all Forrest classification 1b (n = 8); duodenal adenoma (n = 1). Prior haemostasis combinations used were: adrenaline injection with diathermy (n = 11); adrenaline injection with clips (n = 1); adrenaline injection, diathermy and clips (n = 1). Endoclot™ was successful in 3 patients with lower GI bleeding after EMR. Prior haemostasis used was argon plasma coagulation (n = 1).

Endoclot™ therapy failed in 2 cases. In the first patient, haemostasis was achieved when Endoclot™ was applied to an originally suspected duodenal ulcer that continued to bleed despite adrenaline injection and diathermy. However, the patient developed melena 2 days later, requiring repeat endoscopic therapy with adrenaline injection, clips and diathermy to regain haemostasis. Ensuing investigations showed an underlying gastrointestinal stromal tumour. The second patient had residual bleeding from a Dieulafoy lesion despite treatment with clips and sclerotherapy. Although Endoclot™ initially achieved haemostasis, the patient had melena 3 days later. The recurrent bleed was controlled with adrenaline injection and banding of the bleeding vessel.

**Conclusion** Endoclot™ is a potentially effective method of achieving haemostasis in GI bleeding when standard endoscopic therapies have failed. Anecdotally, in this series it was noted to